

## Claims

I claim:

1. A method for determining a compactness ratio of a plurality of data sets, comprising:
  - measuring a combined compactness value for a union of the plurality of data sets;
  - measuring an individual compactness value for each one of the plurality of data sets; and
  - dividing the combined compactness value by a sum of the individual compactness values to determine the compactness ratio of the plurality of data sets.
2. The method of claim 1 further comprising:
  - measuring an area of a particular data set;
  - measuring a border of the particular data set; and
  - dividing the area by the border squared to determine a particular compactness value of the particular data set.
3. The method of claim 1 further comprising:
  - measuring an area of a particular data set;
  - measuring a maximum chord of the particular data set; and
  - dividing the area by the border maximum chord to determine a particular compactness value of the particular data set.

4. The method of claim 1 wherein the compactness ratio is:

$$CR_{f_1 \dots f_M} = M \frac{C_{(f_1 \cup \dots \cup f_M)}}{C_{f_1} + \dots + C_{f_M}}$$

where  $M$  is the total number of data sets, and  $N$  is a dimensionality of the data sets.

5. The method of claim 1 wherein the data sets are composed of pixels in a sequence of video frames.

6. The method of claim 1 further comprising:

determining a plurality of compactness ratios, one compactness ratio for each possible pair of data sets; and

combining the pair of data sets having a maximum compactness ratio.